

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

IN THE CLAIMS:

Claims 1-10 (cancelled).

11. (Previously presented) A retaining wall for retaining an embankment or similar structure that is formed from a plurality of tyres arranged in a plurality of courses adjacent to the embankment wherein at least some of the tyres are each cut:

(a) in a plane between opposing side walls thereof and such that a section of the tyre remains uncut to provide a hinge for pivoting of the tyre portions thereabout, and so that the tyre can be arranged in the wall such that both side walls generally face downwards; or

(b) to remove a substantial proportion of one of the side walls wherein the removed side wall is arranged in the tyre to be adjacent to the remaining side wall, and the tyres are arranged in the wall so that the remaining uncut side wall generally faces downwards.

12. (Original) A retaining wall as claimed in claim 11 wherein in (b), a liner is positioned between the removed and remaining side walls to cover the lower opening of the tyre when arranged in the wall.

13. (Original) A retaining wall as claimed in claim 11 or claim 12 wherein the cut tyres are substantially filled with fill material in the finished retaining wall.

14. (Previously presented) A retaining wall as claimed in claim 12 wherein the courses of the retaining wall are arrayed in a plurality of courses adjacent to the embankment wherein at least some of the tyres are each cut:

(a) in a place between opposing side walls thereof and such that a section of the tyre remains uncut to provide a hinge for pivoting of the tyre portions thereabout, and so that the tyre can be arranged in the wall such that both side walls generally face downwards; or

(b) to remove a substantial proportion of one of the side walls wherein the removed side wall is arranged in the tyre to be adjacent to the remaining side wall, and the

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

tyres are arranged in the wall so that the remaining uncut side wall generally faces downwards.

15. (Previously presented) A retaining wall for retaining an embankment or similar structure including a reinforcing section extending rearwardly into the wall from an outer portion thereof, the reinforcing section being part of the retaining wall and being formed from:

- (a) longitudinal strips formed from tyre treads; or
- (b) conveyor belt lengths;

wherein the treads or belt lengths are joined to define a grid formation.

16. (Original) A retaining wall as claimed in claim 15 wherein the reinforcing section is attached to the outer portion of the wall.

17. (Previously presented) A retaining wall as claimed in either claim 15 or claim 16 wherein the reinforcing section is formed by joining together a plurality of tyre tread lengths and conveyor belt lengths.

18. (Cancelled)

19. (Previously presented) A retaining wall as claimed in claim 15 or 48 wherein said individual belt lengths are attached, linked, or threaded to/through adjacent belt lengths to define the grid formation.

20. (Previously presented) A retaining wall as claimed in claim 15 or 48 wherein the reinforcing section is formed from a plurality of sections cut from mining conveyor belts.

21. (Previously presented) A retaining wall as claimed in claim 15 wherein the outer portion of the wall is formed from a plurality of elements that are arranged in a plurality of courses adjacent to the embankment and a reinforcing section is provided for each course and is arranged to extend generally horizontally or to be downwardly inclined in the wall.

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

22. (Previously presented) A retaining wall as claimed in claim 15 wherein the outer portion of the wall is formed from a plurality of tyres that are arranged in a plurality of courses adjacent to the embankment, with at least some of the tyres in the outer portion of the wall having an intact tread portion.

23. (Previously presented) A retaining wall as claimed in claim 15 wherein the outer portion of the wall is formed from a plurality of tyres arranged in a plurality of courses in a manner as defined in claim 1.

24. (Previously presented) A retaining wall as claimed in any one of the claims 1, 21, 22, or 23 wherein the plurality of courses define a row and wherein a plurality of rows are arranged adjacent to the embankment.

25. (Previously presented) A method for forming a retaining wall for retaining an embankment or similar comprising the steps of:

(a) forming a base for the retaining wall adjacent to the embankment and that slopes downwardly to the embankment from surrounding ground; and

(b) arranging a plurality of tyres in a plurality of courses adjacent to the embankment and along the base, such that a central axis of each tyre in the retaining wall is inclined in both vertical and horizontal.

26. (Previously presented) A method as claimed in claim 25 wherein the base is formed to provide an incline in the wall to vertical, at a batter angle of 10° to 20°.

27. (Previously presented) A method as claimed in claim 26 wherein a central axis of each tyre in the wall is inclined from vertical at an angle that is approximately equal to the batter angle.

28. (Previously presented) A method as claimed in claim 27 wherein each course of tyres is arranged to be offset along the line of the course from adjacent course(s).

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

29. (Previously presented) A method as claimed in claim 26 wherein in step (b) a course of tyres is laid and each tyre is at least partially in-filled with a fill material prior to laying the next course.

30. (Original) A method as claimed in claim 29 wherein each tyre in a course is filled such that:

- tyre(s) in the next course abut that tyre; or
- tyre(s) in the next course are separated by the fill material from that tyre.

31. (Original) A method as claimed in claim 29 wherein during filling of each course, additional fill material is provided to fill gaps between tyres, and between the tyres and the embankment.

32. (Previously presented) A method for forming a retaining wall for retaining an embankment or similar structure comprising the steps of:

(a) forming a base for the retaining wall adjacent to the embankment and that slopes downwardly to the embankment from surrounding ground;

(b) arranging a plurality of tyres in a plurality of courses adjacent to the embankment and along the base,

wherein, prior to laying a course, at least some of the tyres in the course are each cut:

(i) in a plane between opposing side walls thereof and are arranged in the walls so that both side walls generally face downwards; or

(ii) to remove a substantial proportion of one of the side walls, and are arranged in the wall so that the remaining uncut side wall generally faces downward.

33. (Original) A method as claimed in claim 32 wherein in (i), a section of the tyre remains uncut to provide a hinge for pivoting of the tyre portions thereabout.

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

34. (Original) A method as claimed in claim 32 wherein in (ii) the removed side wall is arranged in the tyre to be adjacent to the remaining side wall when the tyre is located in the wall.

35. (Original) A method as claimed in claim 34 wherein a liner is positioned between the removed and remaining side walls to cover the lower opening of the tyre when the tyre is arranged in the wall.

36. (Previously presented) A method for forming a retaining wall from a plurality of tyres comprising the step of cutting at least some of the tyres:

(a) in a plane between opposing side walls thereof, wherein a section of the tyre remains uncut to provide a hinge for pivoting of the tyre portions thereabout, and then arranging those tyres in the wall so that both side walls generally face downwards; or

(b) to remove a substantial portion of one of the side walls, with the removed side wall being arranged in the tyre to be adjacent to the remaining side wall, and then arranging those tyres in the wall so that the remaining uncut side wall generally faces downwards.

37. (Original) A method as claimed in claim 36 wherein in (b), a liner is positioned between the removed and remaining side walls to cover the lower opening of the tyre when it is arranged in the wall.

38. (Original) A method as claimed in claim 36 or claim 37 wherein the cut tyres are substantially filled with a fill material in the finished retaining wall.

39. (Previously presented) A method as claimed in claim 36 wherein a plurality of tyre courses are constructed in accordance with the method as defined in claim 25.

40. (Previously presented) A method for forming a retaining wall for retaining an embankment or similar structure including the step of positioning in the wall a reinforcing section that is formed from:

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

- (a) longitudinal strips formed from tyre tread; or
- (b) one or more conveyor belt lengths;

wherein each of the reinforcing section is formed into a grid structure by joining together a plurality of tyre tread lengths or conveyor belt lengths.

41. (Original) A method as claimed in claim 40 wherein an outer face of the wall is defined by arranging a plurality of elements in a plurality of courses adjacent to the embankment to define the face.

42. (Original) A method as claimed in claim 41 wherein, prior to or after the arranging of each course, a reinforcing section is attached to that course.

43. (Cancelled)

44. (Previously presented) A method as claimed in claim 41 wherein the elements are tyres.

45. (Original) A method as claimed in claim 44 wherein at least some of the tyres have an intact tread portion.

46. (Previously presented) A method as claimed in claim 41 wherein the outer face of the wall is formed by using a method comprising the steps of:

- (a) forming a base for the retaining wall adjacent to the embankment and that slopes downwardly to the embankment from surrounding ground; and
- (b) arranging a plurality of tyres in a plurality of courses adjacent to the embankment and along the base.

47. (Previously presented) A method as claimed in any one of the claims 40-42 and 44-46 wherein the conveyor belt lengths are cut from a mining conveyor belt.

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

48. (Previously presented) A retaining wall for retaining an embankment or similar structure including:

an outer portion formed from a plurality of tyres that are arranged adjacent to the embankment with the tyres in the outer portion having an intact tread; a reinforcing section extending rearwardly into the wall from the outer portion and being formed from:

- (a) longitudinal strips formed from tyre treads; or
- (b) conveyor belt lengths.

49. (Cancelled)

50. (Cancelled)

51. (Previously presented) A tyre for use in a retaining wall, the tyre being cut:

(a) in a plane between opposing side walls thereof and such that a section of the tyre remains uncut to provide a hinge for pivoting of the resulting tyre portions thereabout, and so that the tyre can be arranged in the wall such that both side walls generally face downwards; or

(b) to remove a substantial proportion of one of the side walls wherein the removed side wall is arranged in the tyre to be adjacent to the remaining side wall, so that the tyre can be arranged in the wall so that the remaining uncut side wall generally faces downward.

52. (Previously added) A tyre as claimed in claim 51 wherein (b) a liner is positioned between the removed and remaining side walls for covering the lower opening of the tyre when arranged in the wall.

53. (Previously added) A method as claimed in claim 42 wherein the elements are tyres.

54. (Previously added) A method as claimed in claim 53 wherein at least some of the tyres have an intact tread portion.

55. (Previously added) A method as claimed in claim 25 wherein the arranging step (b) includes placing the tyres along the base with a central axis of each tyre in an outer face of the retaining wall being inclined to both vertical and horizontal.

56. (Previously presented) A retaining wall for retaining an embankment or similar structure including a plurality of tyres arranged in a plurality of courses adjacent to the embankment and such that a central axis of each tyre in an outer face of the retaining wall is inclined to both vertical and horizontal, wherein at least some of the tyres are each cut to remove a substantial proportion of one of the side walls and are arranged in the wall so that the remaining uncut side wall generally faces downwards.

57. (Previously presented) A retaining wall as claimed in claim 56 wherein each tyre's central axis is inclined to vertical at a batter angle ranging from 10° to 20°.

58. (Previously presented) A retaining wall as claimed in claim 56 or claim 57 wherein adjacent courses are separated by a fill material or abut.

59. (Previously presented) A retaining wall as claimed in claim 58, wherein adjacent courses are separated by a fill material by a distance that is half a tyre's diameter.

60. (Previously presented) A retaining wall as claimed in claim 56 wherein each tyre is at least partially filled with a fill material, and further fill material fills gaps between the tyres, and between the tyres and the embankment.

61. (Previously presented) A retaining wall as claimed in claim 60 wherein the fill material includes concrete at the lowest course of tyres, or a granular or particulate, free draining material.

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

62. (Previously presented) A retaining wall as claimed in claim 61 wherein the granular particulate material is selected from a group consisting of cobble, sand and/or shredded tyre.

63. (Currently amended) A retaining wall ~~as claimed in claim 56 for retaining an embankment or similar structure including a plurality of tyres arranged in a plurality of courses adjacent to the embankment and such that a central axis of each tyre in an outer face of the retaining wall is inclined to both vertical and horizontal, wherein at least some of the tyres are each cut to remove a substantial proportion of one of the side walls and are arranged in the wall so that the remaining uncut side wall generally faces downwards and wherein the removed side wall is arranged in the tyre to be adjacent to the remaining side wall when the tyre is located in the wall.~~

64. (Previously presented) A retaining wall as claimed in claim 63 wherein a liner is positioned between the removed and remaining side walls to cover the lower opening of the tyre when arranged in the wall.

65. (Previously presented) A retaining wall for retaining an embankment or similar structure including a plurality of tyres arranged in a plurality of courses adjacent to the embankment and such that a central axis of each tyre in an outer face of the retaining wall is inclined to both vertical and horizontal, wherein at least some of the tyres are each cut in a plane between opposing side walls thereof and are arranged in the wall so that both sides walls generally face downwards.

66. (Previously presented) A retaining wall as claimed in claim 65 wherein each tyre's central axis is inclined to vertical at a batter angle ranging from 10° to 20°.

67. (Previously presented) A retaining wall as claimed in claim 65 or claim 66 wherein adjacent courses are separated by a fill material or abut.

In re Appln. of CALLINAN et al.
Application No. 09/428,508
Reply to Office Action of August 15, 2003

68. (Previously presented) A retaining wall as claimed in claim 67, wherein adjacent courses are separated by a fill material by a distance that is half a tyre's diameter.

69. (Previously presented) A retaining wall as claimed in claim 65 wherein each tyre is at least partially filled with a fill material, and further fill material fills gaps between the tyres, and between the tyres and the embankment.

70. (Previously presented) A retaining wall as claimed in claim 69 wherein the fill material includes concrete at the lowest course of tyres; or a granular or particulate, free draining material.

71. (Previously presented) A retaining wall as claimed in claim 70 wherein the granular particulate material is selected from a group consisting of cobble, sand and/or shredded tyre.

72. (Currently amended) A retaining wall as claimed in claim 65 for retaining an embankment or similar structure including a plurality of tyres arranged in a plurality of courses adjacent to the embankment and such that a central axis of each tyre in an outer face of the retaining wall is inclined to both vertical and horizontal, wherein at least some of the tyres are each cut in a plane between opposing side walls thereof and are arranged in the wall so that both sides walls generally face downwards and wherein a section of the tyre remains uncut to provide a hinge for pivoting of the tyre portions thereabout.
